

# **Trip Report 2003 Annual Inspection of the Grand Junction, Colorado, UMTRCA Title I Processing Site**

## **Summary**

The Grand Junction Processing Site, inspected for the first time by the Long-Term Surveillance and Maintenance (LTS&M) Program on June 16, 2003, is in excellent condition. There was no evidence of ground water extraction or other construction that would encounter contaminated ground water. Surface water and ground water samples and water level data were collected on the same day as the inspection. No cause for a follow-up or contingency inspection was identified.

## **1.0 Introduction**

This report presents the findings of the annual U.S. Department of Energy (DOE) inspection of the Uranium Mill Tailings Radiation Control Act (UMTRCA) Title I Processing Site at Grand Junction, Colorado. R. K. Johnson of S.M. Stoller Corporation, the Technical Assistance Contractor at the DOE Grand Junction Office (GJO), conducted the inspection. J. P. Gilmore of DOE-GJO participated in the inspection. P. Oliver of the Colorado Department of Public Health and Environment also was present.

The purposes of the annual inspection were to confirm compliance with the *Ground Water Compliance Action Plan [GCAP] for the Grand Junction, Colorado, UMTRA Project Site* (GJO-99-90-TAR, April 1999), to verify that ground water had not been extracted or exposed without DOE approval, and to determine the need, if any, for additional inspections and monitoring.

## **2.0 Results of Inspection**

Features discussed in this report are shown on the attached drawing. Photographs to support specific observations are identified in the text and on the drawing by photograph location (PL) numbers.

### **2.1 Facility Access**

The former processing site, historically known as the Climax millsite, is owned by the city of Grand Junction and is administered by the Parks and Recreation Department. Property development currently is limited to a concrete-paved riverfront trail constructed on a flood-control dike along the Colorado River (PL-1 and PL-2). Access to the site is easily gained by using the public riverfront trail. A locked gate on the west side of the property is used for access by the ground water sampling crews (PL-3).

## **2.2 Signs, Site Markers, Survey Monuments, and Fences**

No DOE signs, site markers, or survey monuments exist at the Grand Junction Processing Site, and DOE is not responsible for maintaining the fences at the site.

A fence separating the city-owned property from adjacent private properties exists along the northern boundary of the site. A large pile of wood chips on an adjacent sawmill property is piled against the fence and may knock it down in the near future (PL-4). The fence is broken at another location (PL-5). The city will be informed of the condition of the fence. However, there are no security issues, and these conditions do not pertain to the institutional control requirements at the site.

## **2.3 Monitor Wells**

A shallow unconfined alluvial aquifer is contaminated with ammonia, iron, manganese, molybdenum, vanadium, and uranium as a result of historic processing operations. Elevated concentrations of uranium and selenium in the aquifer upstream of the site (monitor well MW-0745) are thought to be naturally occurring and derived from the dark marine shales of the Mancos Shale formation that underlies most of the Grand Valley. The ground water is not used as a water supply for any purpose, and no actual risks exist at the site because no pathways for human use of ground water are complete.

Two ground water monitor wells remain at the site (PL-6 and PL-7) and two offsite wells are located upstream (background) and downstream of the site on private property (PL-8 and PL-9). The wells are completed in the unconfined Colorado River alluvial aquifer. All wells were secure and in good condition. Annual sampling of the wells occurred in accordance with the GCAP during the time of the inspection.

## **2.4 Surface Water Monitoring**

There are no surface water expressions of ground water on the property. Surface water samples are collected annually at two locations along the Colorado River. The upstream location, approximately 1.5 miles (2.4 kilometers) east of the site, and the downstream location, approximately 0.5 mile (0.8 kilometer) west of the site, were sampled during the time of the inspection.

## **2.5 Institutional Controls**

Institutional controls through deed restrictions and city codes prevent the use of ground water at the site. To verify the effectiveness of institutional controls, the Grand Junction Parks and Recreation Department and the State Engineer's Office will be contacted annually to ensure that no construction has occurred without DOE approval and that no wells have been permitted or installed. These offices were contacted in June 2003.

City records indicate no construction activities occurred on the property during the past year. State Engineer's Office records verify that no wells were permitted for the Colorado River alluvial aquifer in the vicinity of the site.

### 3.0 Recommendation

1. Exposure to contaminated ground water under the site needs to be prevented (page 2).

**Recommendation:** Verify the effectiveness of institutional controls by contacting the Grand Junction Parks and Recreation Department and the State Engineer's Office to ensure that no construction has occurred without DOE approval and that no wells have been permitted or installed.

### 4.0 Photographs

Photograph Location Number	Azimuth	Description
PL-1	0	View of the central portion of the site.
PL-2	305	View of the west portion of the site.
PL-3	310	Access gate and city storage area on the west side of the property.
PL-4	300	Woodchip pile against the north perimeter fence.
PL-5	300	Broken fence along a lumber mill waste pile.
PL-6	305	On-site monitor well MW-1001.
PL-7	290	Sampling activities at on-site monitor well MW-1014.
PL-8	320	Off-site background monitor well MW-0745.
PL-9	305	Off-site downstream monitor well MW-0590.

K:\Share\LTS&M\03 Inspection\Grand Junction Proc Site (GJT)\TR07-26.doc



GJT 6/2003. PL-1. View of the central portion of the site.



GJT 6/2003. PL-2. View of the west portion of the site.





GJT 6/2003. PL-3. Access gate and city storage area on the west side of the property.



GJT 6/2003. PL-4. Woodchip pile against the north perimeter fence.





GJT 6/2003. PL-5. Broken fence along a lumber mill waste pile.



GJT 6/2003. PL-6. On-site monitor well MW-1001.





GJT 6/2003. PL-7. Sampling activities at on-site monitor well MW-1014.



GJT 6/2003. PL-8. Off-site background monitor well MW-0745.





GJT 6/2003. PL-9. Off-site downstream monitor well MW-0590.



